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DEC 0 1 2004
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IN THE CLAIMS:

1. **(Original)** Piezoelectric single crystal element which is provided with electrodes for excitation on at least one face or on opposing faces and is excitable to produce a thickness shear vibration, wherein said single crystal element has a crystal cut with a fundamental resonance frequency excitable in a thickness shear mode, in which the effective electromechanical coupling factor k_{eff} is between 0.05% and 3%.

2. **(Original)** Piezoelectric single crystal element according to claim 1, wherein said electromechanical coupling factor k_{eff} is between 0.1% and 2%.

3. **(Original)** Piezoelectric single crystal element according to claim 1, wherein the frequency spacing to the nearest excitable anharmonic resonance frequency amounts to >80 kHz.

4. **(Original)** Piezoelectric single crystal element according to claim 3, wherein the frequency spacing to the nearest excitable anharmonic resonance frequency amounts to >100 kHz.

5. **(Original)** Piezoelectric single crystal element according to claim 1, wherein maximum admittance of the harmonics is <10% relative to said fundamental resonance frequency.

6. **(Original)** Piezoelectric single crystal element according to claim 5, wherein maximum admittance of the harmonics is <5% relative to said fundamental resonance frequency.

7. **(Original)** Piezoelectric single crystal element according to claim 1, wherein said single crystal element is tempered at temperatures of more than 150°C.

8. **(Original)** Piezoelectric single crystal element according to claim 1, wherein the effective thermal expansion coefficients in the plane of said crystal cut deviate from each other by a factor <1.5.

9. **(Currently amended)** Piezoelectric single crystal element according to claim 1, wherein the linear temperature coefficient of said fundamental resonance frequency amounts to zero at least at one point in the region of ~~a~~ an operating temperature of said piezoelectric single crystal element.

10. **(Original)** Piezoelectric single crystal element according to claim 9, wherein said operating temperature is in the range of 10°C to 100°C.

11. **(Original)** Piezoelectric single crystal element according to claim 1, wherein said single crystal element consists of a crystal belonging to crystallographic point group 32.

12. **(Original)** Piezoelectric single crystal element according to claim 11, wherein said crystal element consists of quartz-homeotypic gallium orthophosphate ($GaPO_4$).

13. **(Original)** Piezoelectric single crystal element according to claim 12, wherein the crystal element is a singly rotated Y-cut with a rotation angle Φ between -80° and -88°.

14. **(Original)** Piezoelectric single crystal element according to claim 13, wherein said rotation angle Φ is between -82° and -86°.

15. **(Currently amended)** Piezoelectric single crystal element according to claim 11, wherein said crystal element consists of at least one crystal material selected from a group consisting of langasite ($La_3Ga_5SiO_{14}$), with langanite ~~($La_3Ga_{5,75}Nb_{0,75}O_{14}$)~~ ($La_3Ga_{5.5}Nb_{0.5}O_{14}$), and langatate ~~($La_3Ga_{5,75}Ta_{0,75}O_{14}$)~~ ($La_3Ga_{5.5}Ta_{0.5}O_{.4}$).

16. **(Original)** Piezoelectric single crystal element according to claim 15, wherein the crystal element is a singly rotated Y-cut of langasite ($La_3Ga_5SiO_{14}$), with a rotation angle Φ between -55° and -85°.

17. **(Original)** Piezoelectric single crystal element according to claim 16, wherein said rotation angle Φ is between -60° and -70°.

18. **(Original)** Piezoelectric single crystal element according to claim 1, wherein said single crystal element consists of a crystal belonging to crystallographic space group P321.

19. **(Original)** Piezoelectric single crystal element according to claim 18, wherein said crystal element consists of strontium-gallium-germanate ($Sr_3Ga_2Ge_4O_{14}$).

20. **(Original)** Method for manufacture of a piezoelectric single crystal element which is excitable in a thickness shear mode, comprising the steps of producing a crystal cut with an excitable fundamental resonance frequency, having an effective electromechanical coupling factor k_{eff} lying between 0.05% and 3%, and applying electrodes for

excitation on at least one face or on opposing faces of said single crystal element.

21. **(Original)** Method according to claim 20, wherein said electromechanical coupling factor k_{eff} laying between 0.1% and 2%.

22. **(Original)** Method according to claim 20, wherein said crystal element is heated to temperatures of more than 150°C during application of said electrodes.

23. **(Original)** Method according to claim 20, wherein said crystal element is subject to a thermal treatment of more than 150°C after application of said electrodes.

24 – 31 **(Cancel)**.